

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : JEAN-PATRICK AZPITARTE Docket No.: 01-600
Serial No. : Examiner :
Filed : Art Unit :
For : SYSTEM FOR REMOTELY MANAGING
MAINTENANCE OF A SET OF FACILITIES

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PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks
United States Patent and Trademark Office
Washington, D.C. 20231

Dear Sir:

Prior to the initial office action in the above-captioned newly filed patent application, amend said application as follows:

IN THE TITLE:

Amend the title on page 1 as shown in the attached appendix.

IN THE CLAIMS:

Cancel claims 1-12 in their entirety and in their place, insert new claims 13-25 as shown in the attached appendix.

IN THE ABSTRACT:

Cancel the abstract in its entirety, including the

headings, and substitute the attached Abstract of the Disclosure.

R E M A R K S

By the present amendment, corrections have been made to the title so as to correct a typographical error and to the abstract to conform it with the requirements of U.S. law.

Further, by the present amendment, claims 1-12 have been cancelled in favor of new claims 13-25. This amendment to the claims is not necessitated by any issue of patentability but rather to conform the claims to U.S. format.

An early action on the merits is solicited.

Should the Examiner believe an additional amendment is needed to place the case in condition for allowance, he/she is hereby requested to contact Applicant's attorney at the telephone number listed below.

No fee is believed to be due as a result of this amendment. Should the Commissioner determine that a fee is due, he is hereby authorized to charge said fee to Deposit Account No. 02-0184.

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, DC 20231

on October 4, 2001
(Date of Deposit)

Nicole Motzer

Name and Reg. No. of Attorney

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Signature

October 4, 2001

Date of Signature

Date: October 4, 2001

Respectfully submitted,

JEAN-PATRICK AZPITARTE

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MARKED-UP COPY OF AMENDED TITLE

Page 1, lines 1 and 2:

SYSTEM FOR REMOTELY MANAGING [MAINTAINANCE] MAINTENANCE OF A SET
OF FACILITIES

CLEAN COPY OF AMENDED TITLE

Page 1, lines 1 and 2:

SYSTEM FOR REMOTELY MANAGING MAINTENANCE OF A SET OF
FACILITIES

NEW CLAIMS 13-25

13. A system for remotely managing the maintenance of a set of facilities by a maintenance company and a facility management company, which system comprises:

local monitoring units installed in close proximity to the facilities and each said local monitoring unit comprising means for carrying out measurements on the operation of the facilities for detecting malfunctions;

a first computer, said first computer being connected to the local monitoring units through a transmission network and receiving and processing information relating to the malfunctions detected by the local monitoring units;

a second computer, said second computer receiving from the local monitoring units the same information as the first computer; and

each said local monitoring unit being associated with at least one of said facilities and further comprising control means for allowing a maintenance engineer to notify a start and an end of an inspection of the associated facility, said start and said end being transmitted to the first and second computers, and said first and second computers comprising means for storing all information transmitted by the local monitoring units.

14. A system according to claim 13, wherein said first computer is available to the maintenance company and the second computer is available to the facility management company.

15. A system according to claim 13, wherein each said local monitoring unit comprises means for preventing the first and second computers from sending information relating to malfunctions and failures detected between the start and the end of said inspection and signaled using said control means.

16. A system according to claim 13, wherein each of said computers is connected to a data base collecting all information relating to the facilities and the maintenance thereof, and the information transmitted by said local monitoring units.

17. A system according to claim 13, wherein the first and second computers comprise:

means for counting a number of maintenance inspections carried out for each monitored facility during a predetermined period of time, for comparing said number to a first predetermined threshold, and for transmitting a first maintenance fault signal if the number of inspections does not

reach said first predetermined threshold at the end of said predetermined period of time;

means for computing a total duration of the maintenance operations performed on each monitored facility during said predetermined period of time, for comparing said total duration to a second predetermined threshold, and for sending a second maintenance fault signal if said total duration is not at least equal to said second predetermined threshold at the end of said predetermined period of time;

means for comparing a response time of a maintenance engineer for a facility detected as malfunctioning with a third predetermined threshold, and for sending a third maintenance fault signal when said third predetermined threshold is executed; and

means for comparing a time to restart a facility after a facility malfunction or repair operation with a fourth predetermined threshold, and for sending a fourth maintenance fault signal when said fourth predetermined threshold is exceeded.

18. A system according to claim 17, wherein the second computer comprises means for computing penalties to be applied to the maintenance company after sending a maintenance fault signal as a function of the applied penalties.

19. A system according to claim 17, wherein the first and second predetermined thresholds are set as a function of the monitored facilities, and wherein the third and fourth predetermined thresholds are defined as a function of the detected malfunction or the type of repair, said thresholds being as defined by a maintenance contract binding the maintenance company to the managing company.

20. A system according to claim 13, wherein transmissions between the local monitoring units and the first and second computers are carried out through a basic wire or radio telephone network and wherein the local monitoring units further comprise means for setting-up a link between the local monitoring units and the first and second computers through a radio telephone network, when the local monitoring units cannot access a basic telephone network.

21. A system according to claim 20, wherein at least one local monitoring unit on each site comprises a data transmission unit, wherein said data transmission unit comprises means for transmission over the basic telephone network and means for transmission over the radio telephone network, and wherein other

local monitoring units of the site comprising means for connection to said data transmission unit.

22. A system according to claim 21, wherein the radio telephone network transmission means in the data transmission unit are provided with a backed-up power supply for sending a power supply fault message when the local monitoring unit is no longer powered.

23. A system according to claim 13, wherein each of said local monitoring units comprises means for detecting faults pertaining to operation of said local monitoring unit and for sending malfunction information if such faults are detected to said first computer when said first computer is made available to a maintenance operator.

24. A system according to claim 13, wherein each of said local monitoring units comprises:

means for starting a first timer after a malfunction has been detected on the associated facility;

means for starting a second timer if the first timer has timed out without the corresponding fault having disappeared;

means for sending a malfunction message to the first and second computers if the second timer has timed out without the corresponding fault having disappeared;

means for starting a third timer after a fault has disappeared; and

means for transmitting a fault disappearance message if the third timer has timed out without the corresponding fault reoccurring.

25. A system according to claim 24, wherein a respective duration for each of the first, second and third timers is determined independently from each other as a function of each malfunction type.

ABSTRACT OF THE DISCLOSURE

This system comprises local monitoring units installed in close proximity to the facilities to be monitored, each of which comprises a device for detecting facility malfunctions; a first computer made available to the facility maintenance company, connected to the local units through a transmission network for receiving and processing fault information transmitted from the local units; a second computer made available to a facility management company, which receives the same information as the first computer from the local units; each local unit being associated with a facility and further comprising a control device for allowing a maintenance engineer to signal the beginning and the end of an inspection of the associated facility, these events being transmitted to the computers which comprise a device for storing all information transmitted by the local units.